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AP - JP19910199748 19910509
CPY - TOKD-N
DC - M11 Q52 Q65
DR - 1776-U
FS - CPI;GMPI
IC - C25D15/02 ; F02F3/10 ; F16J10/00
MC - M11-A02 M11-F
PA - (TOKD-N) TOKYO DIAMOND KOGU SEISAKUSHO
PN - JP4333599 A 19921120 DW199301 C25D15/02 006pp
PR - JP19910199748 19910509
XA - C1993-002516
XIC - C25D-015/02 ; F02F-003/10 ; F16J-010/00
XP - N1993-003771
AB - J04333599 The component coated by ultrafine diamond particles eutectoid film has a eutectoid film (pref. 0.1 micron or thick) comprising metallic matrix where ultrafine round diamond particle clusters of nanometer to angstrom magnitude, pref. 500A or smaller size, are dispersed.
- USE/ADVANTAGE - The film applied to machine components such as pistons and VTR cylinders which require high lubrication and anti-abrasion properties.
- In an example, the prep'd. plating bath contained 22 g/l NiSO₄, 28 g/l lactic acid, 2.2 g/l propionic acid, 20 g/l of sodium hypophosphate, several drops of surfactant, 3 ct/l of ultrafine particles. An Al alloy piston was placed in a basket which was then dipped into the plating bath at 90 deg. C to carry eutectoid plating. The plating film thickness was 2 microns after 10min. and 6 micron after 30 min.. Two test pieces were taken from the same coated product to slide each other under 1N loading, 7.0 m/min. of friction speed. SEM observation confirmed that the friction surface yielded a plastic flow and that the generated abraded particle size was 3 micron or less. (Dwg.0/9)
AW - CARBON@
AKW - CARBON@
IW - HIGH ABRASION RESISTANCE LUBRICATE FILM PISTON COMPRISE METALLIC MATRIX CONTAIN ULTRAFINE DISPERSE ROUND DIAMOND PARTICLE CLUSTER
IKW - HIGH ABRASION RESISTANCE LUBRICATE FILM PISTON COMPRISE METALLIC MATRIX CONTAIN ULTRAFINE DISPERSE ROUND DIAMOND PARTICLE CLUSTER
NC - 001
OPD - 1991-05-09
ORD - 1992-11-20
PAW - (TOKD-N) TOKYO DIAMOND KOGU SEISAKUSHO
TI - Highly abrasion resistant, lubricating film for pistons, etc. - comprises metallic matrix contg. ultrafine dispersed round diamond particles clusters